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VOLUME XVII. NUMBER 7

THE AGRICULTURAL STUDENT

A MONTHLY MAGAZINE DEVOTED TO AGRICULTURAL EDUCATION

HORTICULTURE AND FORESTRY NUMBER

MARCH, 1911

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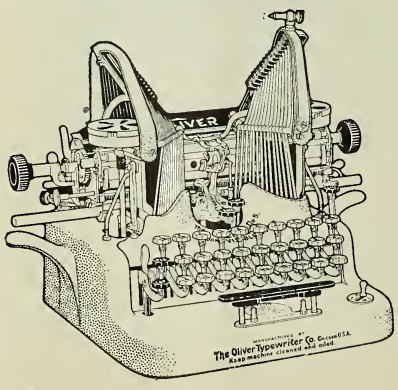

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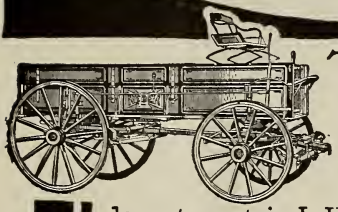

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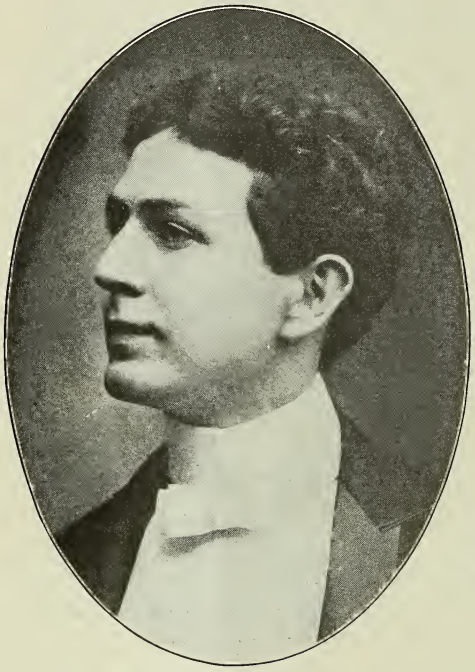

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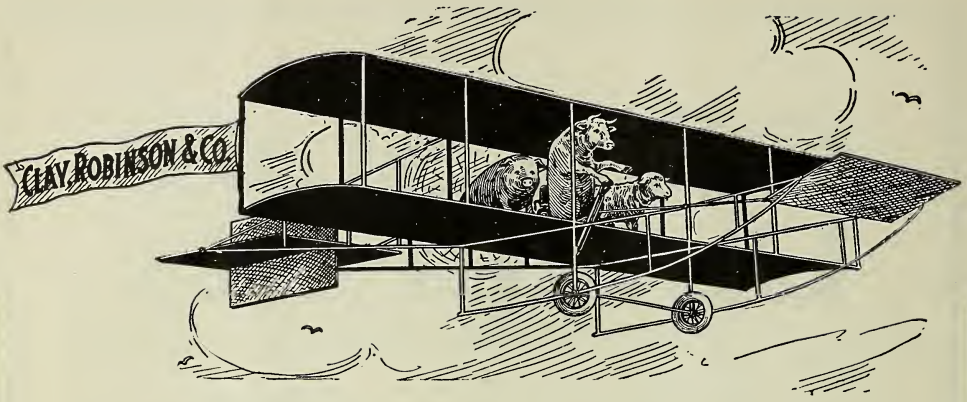

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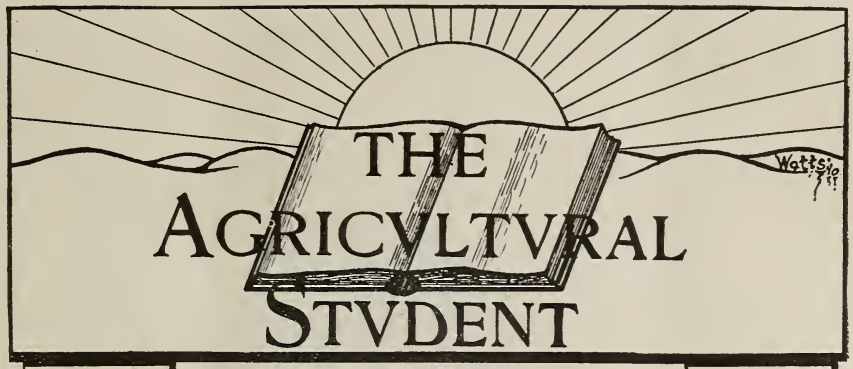

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The Pfeifer Show Print Co., Columbus, O.

The Buckeye.

THE
AGRICULTURAL STUDENT

Vol. XVII. OHIO STATE UNIVERSITY, COLUMBUS, MARCH, 1911 Number 7

The Farm Orchard

By W. Paddock, Professor of Horticulture

Forty-three men and one woman took the work in Farm Horticulture given to the winter course students during the term just ended. The majority of these men came from farms where the orchard has been of secondary consideration. Such orchards usually consist of only a few acres at the most, just enough to supply the home with an abundance of fruit, providing the trees are well cared for. But in most instances it may be assumed that cultivation, pruning and spraying have been neglected as this has been the custom in most neighborhoods. And this is not to be wondered at as the details of orchard management are intricate and the farmer is usually all too busy with the work of the farm.

But in the meantime the price of fruits has gone up so but a few feel that they can afford to supply the family liberally with this valuable food product which all enjoy. The uncared for trees do not, as a rule, produce much fruit that can be used, consequently such trees have simply encumbered the land. But many people have recently come to the conclusion that the old trees are valuable now that their existence is threatened by attacks of San Jose Scale.

We have long known that weeds have usually been beneficial in that they have compelled us to become better cultivators. Similarly, we are coming to take the same view of orchard pests—we are now compelled to take fairly good care of our orchard if we are to expect to harvest usable fruit, and in fact, most of us will be compelled to spray diligently if we are to save the trees.

The recent awakening of our people to the great possibilities of commercial orcharding in Ohio is responsible for the interest that another class of men have had in our work. No doubt some of these men will undertake the renovation of old orchards on an extensive scale while others will start new orchards.

The renovation of old orchards whether large or small is no small task, particularly if one is not versed in orchard management. By the way of illustration let us take account of stock, as it were of a typical farm orchard. The orchard, we will say, consisted of about four acres, and the trees are now about forty years old; this would give us, perhaps 160 trees. But we notice at once that many of the trees are missing. On inquiry we will probably find that the orchard was infested with canker worms several years ago. These worms are voracious feeders and soon strip the leaves from the trees. This is a serious set-back to the tree, and if continued for several seasons in succession the worst infested trees will be sure to die.

The lack of pruning and training will

next catch our eyes as we come closer to the trees. Many of the trees have scarcely been pruned at all, while others have been pruned very vigorously from the bottom up. For some reason it has been thought necessary to cut all of the lower limbs from the main branches, thus leaving the scaffold limbs bare for from 5 to 10 feet of their length, the ends being tipped with a mass of fine, tangled brush. Just why this treatment should appeal to so many people would be difficult to explain, possibly it has its inception in the belief that trees should be pruned and the owner not knowing how else to go about it, lops off the limbs which are closest at hand. And not caring to be bothered with pruning very often he concludes that a good job should be done while he is at it so all of the branches that are within easy reach are removed.

But such pruning, drastic as it is, does not lessen the competition among branches that are left. They are just as thick as ever and if we will examine them closely we will find that many of them are dead. Then if in addition we find such trees to be infested with San Jose Scale it is a question whether it will pay to try to save them. Other trees will be found of comparatively worthless varieties and even though they may be in fairly good condition they will scarcely pay for the spray material and labor that will be required to renovate them. This will leave a comparatively few vigorous trees, of good varieties which with intelligent pruning and spraying may be made to produce paying crops of fine fruit for many years to come.

Not all of the old orchards are so badly dilapidated to be sure and many of them are being made to produce handsome returns. A good illustration of the latest possibilities of the old home orchard was brought to notice recently. A gentleman attended the lectures given on the Institute train a year ago. He decided to try the effects of pruning and spraying on his orchard of one and three quarters acres. He attended the lectures again this winter and reported that as a result of his efforts he sold nine hundred dollars worth of fruit which gave him a net profit of seven hundred dollars.

The points we wish to make are that while the details of orcharding are intricate, yet any intelligent man should be able to master them, if the trees in the few acres of the farm orchard are in fairly good condition they may be made to produce more profit than many times that number of acres devoted to the usual farm crops. This being true one might better hire some of the plowing and seeding done and see that the trees are well sprayed at the proper time.

Finally, orchard trees cannot withstand the attacks of scale very long and if the trees are to be saved prompt action is necessary.

Trees as a Money Making Crop

By C. H. Goetz, Instructor in Forestry

It has been and still is thought by the majority of people that if the timber is cut down in a forest it will take another crop about the same time to mature from the seed as it took the first, This idea comes from the fact that they have seen agricultural crops year after year take about the same time to grow and to mature, and so they can not think of anything different as regard the forest tree crop.

Now while this may be true if the forest were left to itself and neither hindered nor helped by the hand of man, yet as the forest in most cases when cut down by the hand of man, is left in such a condition that the reseeding can not go on for many years to come, and then only in part. it is easily seen that there will not be a forest at the proper time or at the length of rotation in which there should be a crop ready for cutting.

On the other hand if the hand of man is helping the restocking of the land either by artificial reseeding or by planting and then giving proper care to the forest area, it will be long before the time of the virgin rotation when we shall see another crop ready for the woodman's axe.

In the same way many people think that if a certain forest area has yielded a certain amount of timber that, a future crop from that same area would be neither more nor less than the first crop. They do not carry their reasoning as regards their other crops far enough to include the forest crop in the crops of the land. It has been, however, conclusively proven in some of the European forests, that a virgin forest can after the first cutting with proper care and management be made to produce twice, yes three times, as much timber per year and per rotation. Secretary of Agriculture Hon. James Wilson is one of his yearly reports says: "It is as sure that forest land can be made to grow successive crops of trees under proper methods as that plow land can be made to grow successive crops of wheat."

But as American farming has had to develop and is still developing methods adapted to the condition of each region to make the best of the agricultural lands, so must the forester and the man who wishes to raise trees, learn by scientific study, and practical trial to make the best use of our timber trees and our timber land.

When we speak of trees as a money making crop, we mean of course the raising of trees in a commercial way. Commercial tree study begins with the tree in the nursery, the forest or the woodlot and follows it all the way to the finished product in the market

The first thing to be considered is whether it will pay or not to raise a certain species of tree in a certain locality. In order to determine that, we must know the market prices, the length of time it takes the tree to grow to commercial size, the expenses connected with the raising and the taking care of the tree till it is ready for cutting. Then having figured our money invested at a certain rate at compound interests for the period of rotation and found that we are making money above that which we might get by placing the land to some other use, we can safely go ahead and plant or sow as the case may be the land with forest trees of the paying kind.

The question is often asked, what trees would you advise me to plant. This

is often a hard question to answer, as the successful raising of trees for profit depends not only on the soil and climate, but often as in agricultural crops on the man who does the work. These general rules, however, may be layed down. First that it is always safer to raise a species of tree which is native in that region, than to try to raise one which has not been acclimated. Second, that all other things being equal the fastest growing tree should be chosen. Third the trees that will bring the most money in the market, that can be raised the largest number per acre at the least expense are the ones to raise. Fourth the trees which have the least number of enemies and can stand the climatic changes the best and at the same time are the same money producers as others are to be considered as good trees for commercial planting.

Now you may ask, how can I know or find out these facts. There are several ways. One is to write to your experiment station for the information, another is to look around you and notice what others are doing, and what you might do. But do not do as did a farmer of Southern Ohio who had a fine farm, but the locust trees on his land were so persistent in coming up and occupying the ground that he finally gave up the struggle against them and sold his farm, and then saw the man to whom he sold come in and give over the farm to the growth of locust trees, and in a very short time make enough money out of the locust trees (for fence posts) to more than pay for the farm.

In some localities we could recommend the locust as a good commercial crop, in others the Catalpa, and in still others the white ash, etc. Every locality has its own peculiarity as to soil, climate, etc., so that no general rule can be given. The same holds as to market prices.

Written in the interest of farm forestry and afforestation.

The Sugar Maple.

The Home Garden

L. M. Montgomery, Assistant in Horticulture

The subject of Vegetable Gardening as it relates to the farmer may seem commonplace and unimportant. But the truth remains that, although most farm homes do have some sort of a garden plot, there is a woeful lack of appreciation of the possibilities associated with it.

With the possible excepton of the fruits there is no department of farm operations and practices that will exceed the garden in financial returns directly and indirectly for the time and labor bestowed upon it. And above the item of mere financial return may indicate the satisfaction arising from a well planned and operated vegetable garden which is not measurable in coin.

This pleasure obtains, first, in actually seeing the plants grow and, second, in the use of their products on our table in their season.

Very many farmers assert that it doesn't pay,—that vegetables can be bought cheaper than they can raise them. Without taking space to give figures confirming a negation of such assertions it may be said that if all farm operations were handled on the same basis and plan as many of our farm gardens, very little success would be attained in any line.

In brief, gardening is not primarily a woman's job, to be done with the spade and hoe, though due credit must be given, for much of the success that has been attained, to feminine efforts. In the name of fair play and common decency let the man take over the task of planting and growing the garden crops with such assistance from the other side of the house as seems fitting. Under such a plan, with feminine cooperation, the farmer will not only add dollars to his savings, but will multiply his sum total of pleasure and satisfaction of living, many times.

METHODS AND PRACTICES.

The lack of systematic practices is responsible for much of the failure associated with the vegetable garden, as well as other agricultural operations. Hence, the first steps in the direction of better results will be effectualized by the preparation of a well defined plan of procedure, comprehending the location of the garden, its form, proportions of crops, their arrangement, varieties, quantity of seed, order and succession of planting, and cultural requirements. Such a plan can be worked out on paper and will serve as a guide for all the operations of the year.

Details are not permissable in this short article. Suffice it to say that for most economical culture all crops should be planted in rows and, if space permits, at such distances as to admit of horse cultivation.

No doubt much of the failure and disappointment in garden enterprises is due to the use of poor seed. No where in agricultural pursuits is the necessity of good seed more to be emphasized than in gardening. Good seed for the garden involves several considerations:

1. Viableness or ability to produce plants.

2. Purity with respect to name or type.

3. Freedom from foreign matter and adulterations.

4. Freedom from weed or other seed.

Great discouragement often comes through the failure of seed to grow as, also, from the maturing of a crop of inferior quality from seed not true to name. Adulterations, intentional and

otherwise, decreases the chances of a good stand of plants and entails a loss upon the grower. Weeds of noxious character are often introduced through seed not properly harvested and cleaned.

Good seed of largest size for the variety produce the strongest plants and, all things considered, are the kind to be used. Inferior seed is delayed in germination, gives an insufficient stand of plants, produces plants of slow growth, and lacking in vigor and productiveness.

The best seed is always the cheapest and poor seed is dear at any price or even as a gift.

We are dependent upon the reputation of our seedsman and germination tests for security against low vitality. With respect to purity we are dependent, without recourse, upon the fidelity of the seedsman and his employees.

Adulterations except with seed of the same species, can be detected by observation, though their noxious character can not be predetermined except with diligent study.

Hence, the wisdom of discarding all seeds containing admixtures of other kinds of unknown character. Home grown judiciously selected seed will obviate most of the difficulties incident to inferior seed. We can not refrain at this point from urging the selection of only standard varieties for the home garden. Novelties are to be avoided and new sorts to be passed by until their merits shall have been clearly shown.

CELERY GROWN UNDER SKINNER IRRIGATION.

We have a large number of reliable productive sorts, which should be used until something better has been demonstrated.

But the best laid plans and the best of seeds may not bring the desired result if adverse conditions prevail.

A very prevalent adverse influence is that of drouth, and we should, by all means, take such action as may be necessary to mitigate or overcome this evil

influence. The suggestion of irrigation is likely to meet with considerable indifference by those living in humid climates, but the fact remans that even here in Ohio there are often tremendous losses due entirely to the lack of sufficient water to properly mature the crops. The problem of supplying any deficiency in this regard is a vital one to commercial gardeners and is of much moment to the home gardener.

Recent developments have brought to our command more suitable means of supplying water mechanically during periods of drouth, than was formerly possible.

Upon many farms there is an abundance of water within easy reach and we have only to provide suitable means of distribution to enable us to put our crops beyond all danger of being cut short for the want of moisture. Such a system, involving the overhead springling plan, may be cheaply installed and efficiently manipulated. Such a plan comprises parallel lines of one inch or larger galvanized pipe about 50 feet apart supported upon wooden or gas pipe posts (preferably) about 8 feet above the ground. These pipes are fitted with small special nozzles at four-foot intervals set in a straight line throughout the entire length of the pipe line. These lines of distributing pipe are connected at one end, by means of a special revolvable union, to the water supply, which when under about 40 pounds pressure obtained by direct pumping, supply tank or other means, will procure a gentle, even distribution of water in the form of a fine spray over the adjacent area. By turning the pipe containing the nozzles from time to time all the crops within 25 feet on either side of each nozzle line will be nicely watered, with the result of an addition of at least one third to the value of the crop. In some instances it may mean the difference between total loss and a full crop. The cost of installing such a system exclusively of the water supply itself will not exceed $100 per acre, and its cost may be returned in a single season by the additional yields obtained. The water supply may be obtained from a nearby spring, well, pond or stream of water and may be rendered available, by such motive power as will furnish a constant supply at critical periods. Gasoline or gas engines are most commonly used. Electric power, where available, is very desirable, but a little more expensive.

Varieties of Winter Apples for Southern Ohio

F. H. Ballou, Assistant Horticulturist

The writer is often asked to name a short list of the more dependable winter apples for southern Ohio. At the present time I believe the Rome Beauty, Jonathan, Grimes and Stayman to be the very best for the planter who desires to grow a small number which embraces prolificacy, attractiveness and good quality and which, moreover, covers a long season of maturity. There are other varieties, both old and comparatively new, which possess, or promise to possess, value for the Southern portion of Ohio, but none to which we should quite so confidently turn for combined commercial and home qualifications.

The Rome Beauty comes to us as a special heritage from Nature—an apple of, for and by Southern Ohio, although its adaptability is so remarkable as to render it a treasure to other and widely separated sections of the United States. The intensely interesting history of the Rome Beauty is familiar, perhaps, to the majority of horticultural students in Ohio. This history cannot but suggest to the more thoughtful that the guarding, guiding hand of the Great Creator marked and determined the destiny of this child of nature, from the simple, precious seed hidden away in the heart of the mother fruit to the mature, fruitful tree which, for many years, marked the Southernmost, therefore the sunniest point of Ohio.

From the time of the appearance of the original Rome Beauty tree as a tiny sprout springing a seedling rootstock upon which the graft had perished, in the old, Putnam Nursery near Marietta, its existence was seemingly one which promised to be snuffed out upon discovery. However, discovery was delayed until a most fortunate moment when the attention of the owner of the nursery was directed to the "original" sprout thriving lustily upon its own root, by a Mr Gillett of Lawrence County, who was visiting the nursery and selecting an order of trees for planting at his home near Proctorville, Rome Township. The "stray" tree was uprooted and cast gratuitously in among the selected, grafted trees constituting the order and evidently entirely forgotten by both donor and recipient.

The "closest call" of this homeless, nameless, though so far marvellously fortunate "whip of nature" was yet to come. When the order of trees purchased at Marietta was finally reviewed by Mr. Gillett, prior to planting, the seedling tree was rediscovered and cast aside as valueless, the planter remarking upon its supposed worthless character. However, his young companion's smypathy was aroused. The boy's innate reluctance to see a living tree sacrificed inspired him to make an effort to save its life. He rescued the little tree from the trash-heap and planted it down by the home, in a corner of the field by the river.

Thus was the now widely famous Rome Beauty apple saved from oblivion and added to the pomological treasures of the greatest of all apple producing nations.

The Rome Beauty has its weaknesses and its limitations; but with suitable environment and proper care it will build homes, clothe, feed, warm, and provide luxuries for, the orchardist's family and add wealth to the state wherein it flourishes.

The Jonathan comes to us from the state of New York—a seedling of the

far-famed Esopus Spitzenberg. Strange to relate this beautiful apple so rich in the qualities which combine to attract the eye and satisfy the palate of the most fastidious fruit lover, finds a more congenial home, therefore higher appreciation, in Ohio than in its mother state. The true value of the Jonathan was of tardy recognition—not so much because of the lack of recognition of its merits by the planter as because the slender, straggling habit of growth in the nursery served as a barrier to generous propagation by nurserymen generally. This variety, indeed, carries with it into the orchard, in a somewhat lesser degree, the slender, straying, days; but, by care in pruning, this tendency may be so overcome that quite shapely trees will result. A more excellent plan of growing Jonathan, however, is to first plant some strong, vigorous variety such as Northern Spy, Ben Davis or North Western Greening upon which it may readily be top-worked either by budding or grafting—preferably by grafting.

Grimes Golden is a native of West Virginia which, like Rome Beauty and Jonathan has earned a prominent position, because of its excellence of quality, in widely separated apple districts of the United States. The weakness of the Grimes as a variety is that of the tree. While vigorous and a splendid grower and bearer in its early life, advancing years witnesses a peculiar susceptibility to the trouble commonly spoken of as "crown disease"—a canker attacking the body of the tree at the surface of the ground. It has been determined that this disease is caused by the same bacteria which causes twig-or "fire-blight" of the apple, pear and quince. The Grimes, however is not the only variety especially subject to this discouraging trouble, as the old and well known varieties, Fallawater and King of Tompkins Co., usually suffer a high percentage of infection and mortality at a period when the trees should be attaining their height of fruitfulness. It seems difficult, perhaps impossible, to explain just why the Grimes and the other varieties mentioned are more readily subject to this particular form of disease than varieties distinctly less vigorous. To overcome this defect of Grimes the same plan may well be utilized as with the Jonathan—top-working on a variety of both vigor and resistance.

Stayman (Winesap) is a seedling of the well-known Winesap, produced by Dr. Stayman of Kansas. It has been upward of forty years since Dr. Stayman first endeavored to impress the orchard planters of the value of his excellent seedling; but only within recent years has the true worth of the Stayman been generally recognized. The tree is vigorous and of better habit than the straggling, scrubby appearing Winesap so well known. The fruit is a little less attractive in coloring than the parent variety; but what is lacks in brilliancy is counterbalanced by fine texture and superb qhality of the flesh and splendid keeping qualities. The trees, as the writer has observed them in South-western Ohio, are very prolific. It can be planted with confidence.

The writer is so frequently asked about the new and widely advertised "Delicious." I fervently wish we were in possession of first-hand knowledge that would warrant definite advice. It seems promising. The quality of the fruit is exquisite. Our Experiment Station has a number of trees which, while they seven years top-grafted on young trees, have not borne many apples. An eleven year old tree has produced one or two small crops of very attractive

and high-flavored fruit. The form of the fruit is, as might naturally be expected, quite different in Ohio from that grown in the far North-west under irrigation. Ohio grown Delicious are conical and not elongated as the Pacific Coast Delicious, and the five characteristics protuberances which are so prominent at the calyx end of the Western form are much less in evidence, yet clearly marked on the Ohio grown specimens.

The writer made an effort while at the National Apple Show at Chicago to glean from the Washington growers who produce Delicious in its highest perfection, some definite information as to the value of Delicious as compared with Rome Beauty, Stayman, Spitzenberg, etc., which are leading varieties in the North-west. I was somewhat unfortunate and discouraged in seeking for facts, as the greater number of those with whom I talked seemed much more concerned in their effort to sell me apple land than in getting down to the details which were of most interest to me. However, one man who claims to be a prominent grower of Delicious, declared that while it is a fine variety in many ways he can make two dollars with Rome Beauty where he can make one with Delicious. I am not giving this incident to depreciate anyone's estimation of Delicious—for I am truly hopeful that Delicious will prove a valuable addition to our list of varieties desirable for Ohio—but simply to prove that our own great Rome Beauty is, by certain growers who claim to know, considered the commercial superior of Delicious. The quality of Delicious is, of course, far superior to that of Rome Beauty which has never been classed as a dessert fruit.

King David, as exhibited at Chicago in liberal supply, seems to be closely related to Jonathan. It is about the size and form of Jonathan but with a very dark color. It is a beautiful variety, but whether it will compare favorably with Jonathan for Ohio is yet to be proved.

The beginner in orcharding can hardly hope to "prove all things and hold fast to that which is good." A safer plan and version would be to first seek advice from every dependable, local source, hold fast to the things that are known to be good and, if an adventurous or experimental disposition, prove, in a small way, a few things which, to use a modern phrase, "look good."

Hints for Arbor Day Tree Planting

By Prof. William R. Lazenby

Get a good tree to begin with. There are scores of good kinds of trees. Each variety has merit of its own, but there are many inferior trees of all kinds. We shall learn that one fine tree is worth a dozen second-rate ones.

Take up trees with care, do not unnecessarily mutilate the roots, and do not allow the roots to become dry. Trim all torn and broken roots with a sharp knife. A clean slanting cut heals evenest and surest.

Prune the top to a foot of main branches and shorten there. In this way one can form the crown or head, and balance the loss of roots. We should not allow the leaves to overtax the roots. Many trees die because this point is not observed.

Dig the hole wider and deeper than the roots will just fill. The old roots should not be crowded neither should the newly formed rootlets be compelled to meet a hard soil wall. They can neither penetrate nor feed upon it.

Save the surface soil at one side when the hole is dug. This soil is likely to be mellow, full of humus, and rich in plant food. The under soil is often hard and sterile, and should not be placed directly upon the roots. If good soil is at hand it should be used in place of the barren sub-soil.

Put some of the best soil in the bottom of the hole and set the tree upon it. Plant the tree but little if any deeper than it stood in the soil from which it came. The roots must have air and should not be burried too deep.

Hold the tree erect and sift fine, rich soil among the roots. Lift the tree slightly and shake it gently to make sure the spaces between and underneath the roots are well filled. As the soil is thrown over the roots tramp it down well with the foot. If poor soil is used put it on last.

If the planting is done late in the season and the soil is dry, water may be poured in while the hole is being filled. If the soil is moist do not use water.

As soon as the tree is planted mulch the ground about it with strong manure, leaves or old grass. This will keep the soil moist, free from cracks and prevent it from getting hard. If a mulch is not used the surface soil should be stirred frequently. This will make a dust mulch and keep down grass and weeds.

If the season is dry planted trees may need watering. When water is used give the soil a good soaking and not a mere surface sprinkling. If trees are planted in good soil and well mulched watering is seldom needed.

Plant only such trees as are known to be hardy. School grounds and home yards are poor places to experiment with trees, a tree that will endure hardship and bear neglect should be chosen.

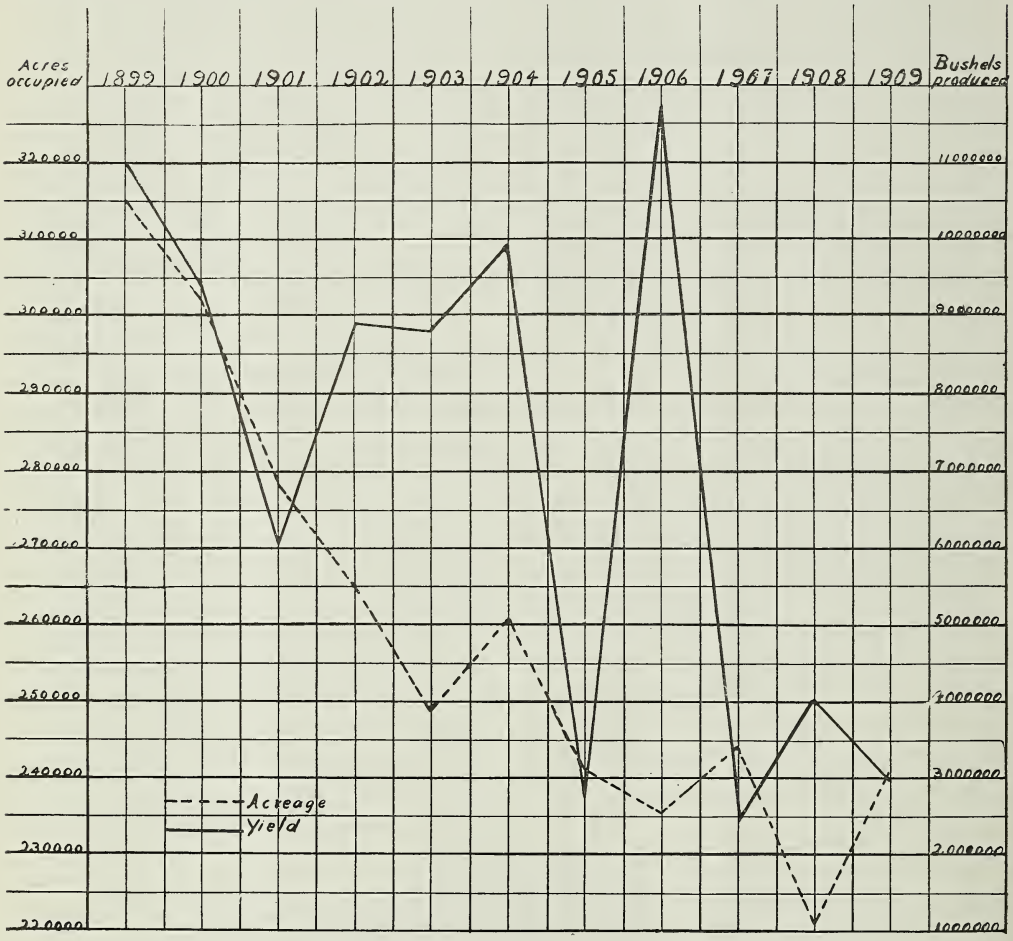
As a rule the best trees for Arbor Day planting are those common in the locality: Maples, Elms, Oaks, and Sycamore. Ashes, will thrive almost anywhere and are easily obtained. Some hardy evergreens should not be overlooked.

At times we may celebrate Arbor Day more wisely by planting a shrub than a tree. A good shrub is better than a poor tree, and in some places a good shrub is better than any tree. Most of our native shrubs are hardy, long-lived and beautiful. They can be got as readily and planted as easily as our trees.

The Farmer's Orchard

By N. E. Shaw, State Nursery Inspector

A glance at the accompanying chart, giving the apple acreage and production of Ohio, will show that a remarkable change has taken place during the last ten years. The area in farm orchards (in which the apple predominates) has decreased 75,000 acres in this period, and while production has varied somewhat with the character of the different seasons, the tendency has also been downward. The area devoted to commercial orcharding in Ohio is undoubtedly larger than it was ten years ago, and the decrease in acreage is due entirely to the general decline and destruction of the farm orchard. The time has probably arrived when the acreage will again begin to advance, but it will be due almost entirely to the plantings made for commercial purposes.



This decrease in acreage and production, this general appearance of neglect is common throughout the State irrespective of the location and the type of agriculture pursued. Not unfre-

quently is the farm seen with everything in first class condition with the exception of the orchard, and its appearance detracts materially from the value of an otherwise excellent farm. The owner usually attempts to excuse the condition of the orchard by saying that no time can be afforded for its attention.

To the advent and multiplicity of insect pests and fungus diseases is due the decadence of these orchards. With the unhindered ravages of these pests, the vitality of the orchard is gradually lessened from year to year and many trees finally succumb under adverse conditions of climate, which easily affect weakened trees. It is difficult for the farmer to realize that this change in conditions has necessitated some effort on his part in order to receive from the orchard the returns which it formerly produced without much attention. Because the operations necessary for the control of these pests must be performed at a season of the year when general farm work is pressing, it is difficult for him to commence such work, and it has been easy for him to doubt its value.

The time has arrived when farmers who value the welfare and happiness of their families, and who relish a bountiful supply of good fruit, must include as a necessary farm operation the proper treatment of the orchard. Unless this is done the time is not far distant when these orchards will have passed their period of usefulness.

It is being demonstrated in some sections of Ohio that is is possible and profitable to devote the necessary time to the better care of the farm orchard and by men who are largely engaged in the production of general farm crops, and .other strictly agricultural lines Formerly many farmers doubted the value of spraying and attributed the inferior fruit to anything but the real causes. A better understanding has begun to prevail, and it is now largely a question of inaugurating the practice of spraying. In a few localities certain parties or firms have provided themselves with suitable equipment and are making a business of spraying farm orchards and town properties. In others two or more farmers have clubbed together, purchased a power outfit and taken up the treatment of their several orchards, and many others have secured barrel pumps for individual use.

The last two years has seen a remarkable awakening along these lines; a better appreciation of the old farm orchard and the value of a bountiful supply of fruit for family use. The writer is not yet ready to concede that the farm orchards in this State will some day be a thing of the past, but has faith that once the Ohio farmer realizes the changed conditions, and understand the necessity of overcoming them, he will be equal to the situation.

May the agricultural graduate as he goes back to the farm, include in his plans for better methods in agriculture, the proper care of the farm orchard.

Spring Work in Horticulture

By Geo. W. Hood

Spring is practically upon us. How many are prepared for the many cares and necessities that come with this time of the year? Now is the time to get busy and start something. Perhaps you are at a loss just what to do. Well here are some reminders.

It matters not what kind of Horticultural work you intend following; the average man can find many things which calls for attention. Let us think for a minute of that old orchard, away over on the other side of the town. Have we looked at it this winter? Does it need any care or attention? Well surely it does and let us take a stroll over in that direction and examine those old veterans, which for so many years have with-stood, advesaries, and enemies, and the elements, striving almost in vain to live against so many insects and diseases, which are proud to pray upon the plants, and they stand silently there without the slightest means of protection. Just look at the trees, and see if there is not a trace of that dreaded enemy to the orchard, the San Jose scale, or the scury or oyster shell scale which are found less often, but still enemies nevertheless.

All of these sap the vitality and in a longer or shorter time will prove masters of the situation and the trees once so promising, are dead. And yet you think the trees do not need some care or attention at least a casual look once in a while? Help the tree to live, buy a sprayer, and use it. If you have only a small orchard or a few trees, get a small spray which best fits your needs and treat the plants to a good cleaning up and see how much they appreciate your kindness, and watch the quick response to good treatment. Do not delay; the time is upon us, and time never waits.

Spraying for San Jose Scale.

After this is completed and while you are still looking at your orchard, critically observe the trees and see if they could not stand some pruning. Aren't the limbs crowded, overlapping and interfering with each other? Suppose you

devote a little time to the cutting off and removing of the surplus limbs, giving the trees some sunshine and good air. It will pay you well in dollars and cents, by the increased quality, the more perfect and higher colored fruit.

So much for the neglected orchard, but there is still another phrase of horticulture which calls for attention at this time, namely the vegetable or home garden.

Every farmer devotes a small portion of his land to the needs of his family, or at least he should think as much about feeding his family well, as his horses and cattle. Green vegetables are almost a necessity, and why not raise them yourself? Make a small hot-bed with very little cost and grow your early lettuce and radishes, as well as your early plants such as tomatoes and cabbages. It takes very little time and care and think of the pleasure and profit of that time? In making the hot-bed you should make them 5 to 6 feet wide and length depending on convenience and number of sash, say 10 to 12 feet long. Face the frame so it slants to the South and fill with good manure, tramp or pack well, and cover this with 4 to 6 feet of good garden soil. Allow to warm up for a few days and sow your lettuce and radishes as well as start your early cabbage and tomatoe plants. It will pay you to attend to this now.

Spraying Insures the Crop.

Forestry as it Should be Practiced on the Farm

C. H. Goetz, Instructor in Forestry

The time has come when every farmer should place a small part of his farm in a permanent woodlot.

In most cases this is not very difficult, as many a farmer is only too glad to do it. Then too most farmers have a small part of their land not under cultivation, and in other cases have a small part in a woodlot.

The most difficult part is too educate the farmers in the use and care of the woodlot. The farmer as a rule understands all about the crops which he is raising on his land, with the exception of the woodcrop. He thinks, that is most of the farmers think, that the woodcrop will take care of itself and grow without their assistance. In most cases this would be true if the forest or woodland crop were left to itself. But as it is, it is not given a fair show, because of the woodlot as a rule being used by most farmers as a pasture lot, how can he reasonable think that a crop of wood will be produced under such circumstances. He would no more think of raising a crop of wheat or corn on a pastured lot than picking up gold dollars from his potato field, and yet most farmers expect a crop of wood from their pastured woodlots.

Now the very first thing that a farmer must do, if he expects to raise trees for a future supply of wood for fuel, posts, timber for barns and other buildings is to use common sense in the raising of this crop, as he uses in the raising of the other crops on his farm. This means that he will have to give this crop the same protection, about the same amount of care as he gives to some of his other crops as to the selection of the proper species. He will have to do a certain amount of wedding, perhaps sowing or planting. Second he must keep a record of his expenses and his work, and his income of the woodlot so that he will be able to know whether it pays him or not to a certain work. Third he must look to the future, and though he may be advanced in years he ought to find out or know whether his farm will not be worth more and how much more for having a certain amount of good timber on it. The farmer will often think or say I will never live to see the day when I shall be able to realize on this woodcrop, and yet in many other ways he will endeavor to lay up some thing for his posterity and his kin. He will perhaps place the money into the bank or buy more land, etc., forgetting all the while that the money invested and spent on his woodlot will in time to come be better than any bank account or other investments in the way of enhancing the value of his farm.

In reality the amount of work and expenses for the raising of a woodcrop is so small as compared to the raising of other crops on the farm as to be practically nill. And still it is somewhat hard to make farmers go into the raising of trees or to have them give the proper care to their existing woodlots. We are sometimes asked as to what proportion of a farm should be devoted to woodlot or to forestry. This is a hard question to answer because in some agriculture districts nearly all the land should be kept in agricultural crops, and yet even their a small fractional area should be given over to a small woodlot. While in less favorable regions a much larger part should be given over to this purpose, and at least all the land not fit for agriculture or horticulture.

But no defined rule can be given because it varies so much with the soil, climate and market as well as other conditions. It must be left largely with the individual farmer.

The woodlots in any region can as a rule be planted with no better kinds of trees than those natural to that region, that is the best trees growing there, taking into consideration the market, the uses, the care, the rapidity of growth, the insect and fungii enemies, the danger from fire and any other points that would make one species more desirable than another. We might point out to the farmers of the central hardwood regions and especially to those of the following states; Ohio, Indiana, Kentucky, Iowa, Illinois and others, the following trees as of value; The walnuts and hickories, the yellow poplar and ashes, the white, red and burr oaks, the black cherry and linden, American white elm and the sycamore.

Also if the timber is to be for fence posts, etc., the following as very good: Arborvitae and cedars, the chestunt and catalpa, the locust and kentucky coffee tree, the mulberry and osage orange.

Both of these classes of timber should be found on the woodlot, so that every farmer may supply himself with both timber and fuel, also fence posts, and at the same time have some timber or wood to sell.

The farmer and many other people have an idea that when the time comes when there will be no more timber, a substitute will be found. There is, however, no possibility as far as we can see now, that wood will be entirely displaced. Every day new uses for wood are found, for which no substitute is found. It behooves us then to use what wood we have as economically as possible and to encourage the planting of timber if we wish to leave something for prosperity to make life for them, worth living. For should we go on consuming the timber at the ratio at which we are consuming it, that is three times as fast as it grows, it will be but a short time until we shall have consumed the capital, and be at the end of producing this valuable material, which is second only to our foodstuffs in the way of necessities of life and making civilization possible.

The History of the Rome Beauty Apple

U. T. Cox, secretary of the Rome Beauty Growers Association

In the fall of 1816 Joel Gillett bought some trees of Putnam's Nursery at Marietta, O., and took them down the Ohio River to what was then known as Quaker Bottom, Lawrence Co., just above Proctorville about two miles. In setting them out the following spring he found a seedling and pitching it out to his son Alanson, he said, "There's a Democrat, you can have that," thinking it no good as he belonged to the opposite party. The lad took the tree and planted it and in a few years it began to bear nice large red striped apples and they called it Gillett's Seedling for a time and then adopted the name Rome Beauty, Rome for the township in which it grew and Beauty for it fine appearance. George Walton claims to have suggested the name, likely about 1830 or soon after that and he died only a few years ago in Kansas, and Alanson Gillett who planted the original tree lived on the home farm till he was very old and then went with some members of his family to Tennessee hoping to benefit the health of some of them and died there. The writer recalls seeing him many a time.

A few sions were taken off the tree about 1827 and top-grafted and trees were grown in the nursery locally soon after 1830 and in a few years most all the trees planted in this locality were Rome Beauty and it was disseminated over many states in a few years, Hon. N. N. Gillett receiving more credit for that than any other man and his son Preston took it to the Pacific coast region in time of the gold excitement over sixty years ago and it has become one of the best commercial varieties out there. There are more apples of this variety grown in southern

Boxes of Rome Beauty Apples.

Ohio than all other kinds put together and it is one of the very best for market and cold storage, but it requires very careful spraying to perfect its fruit and foliage. Its quality is good but not the very best like Grimes, and kept in a cellar it gets dry through the winter, but kept in cold storage when properly ripened and stored at once they retain their juice fairly well and can be kept quite late in the season, often as late as June and not need repacking then.

It is one of the best to plant south of the Baldwin territory and in fact some growers are succeeding with it alongside the Baldwin.

Beauties.

THE AGRICULTURAL STUDENT

A Monthly Magazine Devoted to the Interests of Farming, Stock-Raising, Dairying and Creamery Work.

Published by the Agricultural Student Pub. Co. in connection with the Agricultural College of Ohio State University.

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SUBSCRIPTION PRICE

One year (9 issues) $0 50
Half year 30
Single copies 10

Advertising Rates on Application.

All literary matter should be addressed to the Editor; and all business communications to the Business Manager.

Entered at the postoffice at Columbus, Ohio, as second class matter.

COLUMBUS, O., MARCH 15, 1911.

Editorial

Forest conservation is one of the great questions of today. Only within comparatively recent years has it attracted such wide spread attention. At present the state of affairs is alarming. The limited area of our timber land, the yearly ravage of thousands of acres by fire and the many diseases and insect pests of our trees is producing a critical situation—one which should be in the minds of everyone, and united effort made for the preservation of our native trees and the propagation of their kind.

Only within the last few years have we looked at our State as of much importance horitculturally. With the introduction of the great pest, the San Jose Scale, the "Old Farm Orchard," for which most of the production of fruit in the past has been responsible, is fast going out of existence. Only within recent years have broad fields been devoted to fruit culture. Heretofore we have been looking to the West for our fine fruits, but today we can find them at home and the production is rapidly increasing. There are two sections of our State which are particularly adapted to fruit growing, namely, the northern lake region, where soil and proximity to water make it adaptable, and the southeastern hill country, where elevation is the important factor. With the development of these sections Ohio will rank among the first in production of horticultural products.

Beginning with the April issue The Student will be edited by the new staff, so that they may become acquainted with the duties of their new task for the ensuing year. At the last meeting of the Agricultural Society Mr. S. R. Guard was elected Editor-in-Chief and Mr. Glenn G. Hayes, Business Manager. What is necessary is the hearty co-operation of the student body and everyone should feel a personal responsibility to assist in some way. We have the oldest magazine of its kind and it should be the best. With these able men as leaders and the support of the student body, the ensuing year will witness a marked advancement.

NEWS NOTES

IMPORTANT LIVE STOCK PURCHASED BY O. S. U.

In view of the present day interest in agricultural education, and in animal husbandry work, it is very essential that Colleges of Agriculture should keep very superior specimens of individuals in their herds. The fact is, the State should be able to own the very best individual animals, and place them before the students for careful study, criticism and production. During this University year about 450 students are taking work in Animal Husbandry, and it requires a large amount of live stock for class room work in judging and breed study. For some years the University has been purchasing valuable animals from time to time, but the following have just been secured:

The Percheron Mare Herre (89964) 44389, imported in 1910 by McLaughlin Bros. This mare was foaled in 1907, and was sired by Etudiant (59291) and has for dam Cocotte (64460). Herre was never shown in Europe, but in 1910 she was first in class at the New York State Fair at Syracuse, second in a very strong show at the Ohio State Fair at Columbus, and fourth in the greatest show of the age class ever held at the International Live Stock Exposition, when she won first in class of Percheron Registry Co. special for best mare of her age. Her sire is one of the most noted stallions of the breed, having won the highest honors in France in 1908 and 1909. The mare is of the very best draft type, thick, low set, with plenty of splendid bone and the best of feet. She weighs 1850 pounds.

The Clyderdale mare Moncreiffe Duchess (24214) was foaled in Scotland in 1904. She was sired by Moncreiffe Marquis (9953) and had for dam Ardlethen Barry (18400) by Darnley's Hero (5697). This is the very best Clydesdale breeding. This mare has a long list of prizes to her credit. In 1906 she was first in class at Bariff, Scotland, in 1907 she was first at Echt, at Deeside, at Torphins and won the cup for best female at the Torphins show. In 1908 she won again the first honors in class at each of these shows, and a special prize for the best female at the Echt show. In 1909 she was second in class at these same shows, with a foal at foot. At the New York Horse Show at Madison Square in 1910 Moncreiffe Duchess won second in a stout competition, and the same place later at Toronts, however at the Ottawa show later on winning first over the mare who got place over her at Toronto. Mr. R. B. Ogiloie Sescretary of the American Clydesdale Association, in a letter to the undersigned, congratulates the University on securing what he regards as one of the very best Clydesdale mares in North America.

Moncreiffe Duchess is a dapple brown with white markings, and weighs about 1700 lbs. in moderate flesh. She is typical of the best Clydesdale in conformation, with unusually clean, high class limbs and excellent feet, and is a true and splendid actor.

The Holstein-Friesian bull calf Sir Duke Walker (71158) was bred by Mr. H. A. Moyer of New York. This bull has for sire King Walker (40358,) one of the most promising sires of the breed. The dam of this calf is Countess Segis (95867) with a record of 29.79 pounds of 80 per cent butter in official test for a junior three year old, the second high-

est test for a cow in this age class. Her milk averaged 5.68 per cent fat. Countess Segis is by King Segis, one of the most noted of recent bulls of the breed, with 58 officially tested daughters. This calf was secured by the University as a combination of high class individual with a great pedigree. His sire was the first bull of the breed with a dam and grandam to have records better than 30 pounds.

—Prof. C. S. Plumb.

The Extension Department is already receiving requests from county fair officials for their display. In this display is represented every department of the College of Agriculture and Domestic Science. Three people go with this display, two men and one lady, to explain the exhibits. In the past much interest has been taken in these displays and the demands are coming in earlier than usual this year.

Professor A. B. Graham, superintendent of the Agricultural Extension, has just published a unique, well illustrated bulletin that well demonstrates the kind of work that these kind of schools are doing and shows the interest which the children take in that line of work.

Country Life Conferences are being, or will be held at Xenia, Berea and Bellville. They pertain to, and show what, the country church, school and societies can do for the betterment of the social life of the rural districts. Surely this is a great move.

The Women's Club at Mechanicsburg is holding a Domestic Science Institute. A similar Institute was held at Clifton, in Southwestern Clark County, and another will be held for three days at Lima.

The Extension Department has given over fifty spraying demonstrations, scattered well over the state. Mr. G. H. Gourley has been assisted in this work by four men: Mr. W. F. Liefield and H. J. Lockwood, of Ottawa County, Mr. Ed. Rowan and Mr. Wm. Benbower. These demonstrations can be secured upon the applications of five people from any one locality. The people furnish the materials, and the demonstrators mix and apply the solutions to three or four trees in each neighborhood. They treat the same trees at least three times during the season, and four times if time allows. At these demonstrations one hour is spent in lecturing and then the spraying and pruning work follows.

It will be interesting to know that there are now over two hundred and seventy-five schools and high schools in the state of Ohio in which elementary work is being taught in such fundamental lines as Corn Improvement, Vegetable and Poultry Raising for the boys; and Bread Baking, Butter-making and Sewing for the girls.

About one hundred and fifty newspapers are being furnished with articles on Dairying, Horticulture, Animal Husbandry, Poultry and Agronomy by the Extension Department.

Mr. W. A. Martin, of Kenton, assisted in the Animal Husbandry work at Paulding. W. H. Palmer gave Animal Husbandry demonstrations at Bellefontaine last week.

Raymond Potts has resigned his position with the dairy cattle and will go into business for himself.

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ing build up the agriculture in Ohio to a level that we will all be proud of.

COLLEGE OF AGRICULTURE BANQUET.

On Saturday evening, April 1, the second annual banquet of the College of Agriculture will be held at the Vendome Hotel. This is the one time of the year when the College can get together as a body for a good social time.

The success of the College depends quite largely on the enthusiastic support of the student body, and any event that makes the whole college, faculty and student more of a unit is sure to be well worth while. The success of last year's banquet is only an indication of what this one should be. The school is larger and better than it was last year, the student body is more enthusiastic in its support of the College. So let us all get together, get better acquainted, hear some good speeches, boost the College of Agriculture and the things for which it stands!

Among the notables who are expected to be present at the second annual banquet of the Ohio College of Agriculture are Hon. Judson Harmon, Governor of Ohio; Director Chas. E. Thorne, of the Ohio Experiment Station; Secretary A. P. Sandles, of the State Board of Agriculture; Hon. O. E. Bradfute, Trustee Ohio State University; Dr. W. O. Thompson, John Cunningham, Editor of Ohio Farmer; Col. Wilson, Editor Ohio State Journal, and last and most conspicuous of all, each and every member of the faculty of the Agricultural College.

The Fifth Annual Meeting of the American Berkshire Congress was held on the Campus during Feb. 8 and 9. It was a most successful meeting from every point of view. Among the prominent speakers were Prof. Plumb, Mr. W. S. Corsa of Illinois, Mr. M. H. Gentry of Missouri, Mr. J. F. Myers of Ohio, etc.

THE O. S. U. SHEEP TROPHR.

The students in the College of Agriculture are raising a fund by which a magnificent silver cup, to be known as the "Ohio State University Sheep Trophy" may be purchased. This cup is to be offered at the Ohio State Fair for the best flock, consisting of a yearling ram, two yearlings ewes, and two ewe lambs, of any breed, to be bred by the exhibitor, who must have spent at least one term as a student in some course under the Department of Animal Husbandry of O. S. U. The cup must be won three times in order to become the permanent property of the winner. The Winter Course Students contributed $12. This is merely one phase of the movement launched by the Society for the Promotion of Pure Bred Sheep, to make the Ohio State Sheep Show the best in America.

Those students who are especially interested in animal husbandry, alive to the mutual benefits to be derived through organization and desiring to promote animal husbandry interests both at the University and throughout the State, have launched forth the "Saddle and Sirloin Club of Ohio State University." This club already boasts of some 60 members and we predict a bright future for it, as it fills a niche of decided usefulness. The officers for the present semester are Mr. T. E. McLaughlin, President; Mr. W. E. McCoy, Vice President, and Mr. V. A. Place, Sergeant-at-Arms.

Prof. Plumb delivered several important lectures at Cornell University during the last week in February. The occasion was the annual Farmers' Week at Cornell, in which over 2000 Empire State Farmers were registered, thus making it a most successful affair.

The American Berkshire Congress sale was held Wednesday afternoon, Feb. 8th., in the judging pavillion. It was a combination sale and the average price for the 58 head was $60. Ohio State University came within five dollars of topping the sale on Masterpiece Premier Duchess second, who was knocked off to Mr. W. S. Corsa of Whitehall, Ill., for $145. It will be remembered that this sow was purchased a year ago at a sale of the Ohio Berkshire Association for $92.50. She was a daughter of Masterpiece out of a Duchess dam, of the very best blood lines. Mr. W. K. Dain of Greenville, Pa., paid $150, the top of the sale, for Rutger Blossom, a daughter of Berryton Duke, Jr., consigned by Pensburst Farm, Pa. Mr. Geo. A. Dix of Delaware, Ohio, well and widely known as a member of the 1909 judging team, slipped away with one of the bargains of the sale, a young gilt consigned by Sheffield Farm, Glendale, O., and sired by the famous Longfellow Masterpiece and bred to a litter brother of the grand champion barrow at the last International.

Ralph Postle, the genial shepherd, a former State student, has recently severed his official connection with the University flock, and will in the future be found among his own Cheviots and Sphropshires at White Stock Farm near Camp Chase.

Little Farmers' Reunions are being held at Ostrander by Messrs. Waid and Edmonds. Another is at Harpster, Wyandot County.

How many rural schools have appropriate libraries or any at all? Surely here is a chance for improvement of our country schools.

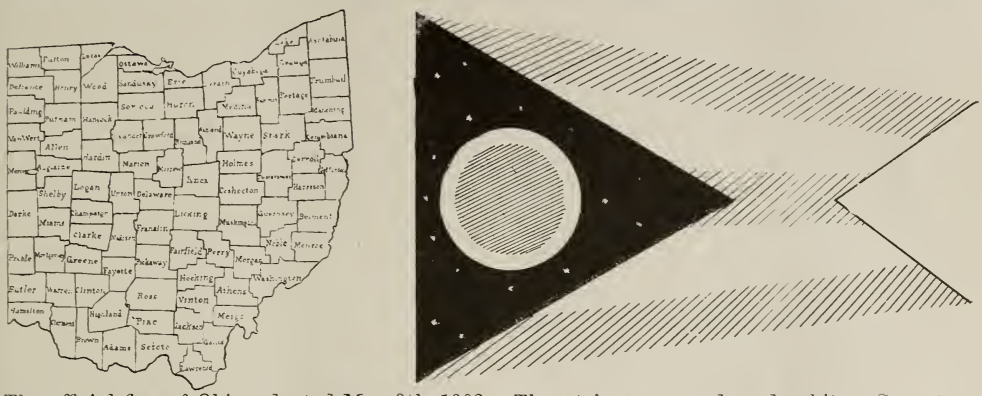
The Ohio Horse Breeder's Association met on Feb. 8 at the Corn Show. The meeting was an unqualified success and the enthusiasm generated there angurs well for the horse breeding industry in Ohio. Among the important speakers was Wayne Dinsmore, Secretary of Percheron Society of America. This association decided to make strong representations to the present general assembly for a Stallion Law in Ohio, a matter in which we are far behind other states. Prof. F. R. Marshall was unanimously re-elected to the secretaryship of the organization.

Prof. Vivian spent Wednesday, March 1, at Greenville, Pa., where he delivered three addresses on soil fertility before a gathering of farmers. The occasion was a "Farmers' Week" where farmers gather and hear talks on agriculture by specialists. This gathering was a duplicate of the one held during the holiday season at the State College. Three such meetings have been held in the State this year. Pennsylvania has no Extension Schools as we have in Ohio and the farmers are given practical instruction by means of these.

At Franklin, Ohio, is one of the oldest Farmers' League. This one is twenty-five years old and is limited to twenty-five members. Only such men as are willing "to be shown" and can take a criticism for all it is worth get any good out of this kind of an organization. They visit each other's farms and see how each can better his own farm. Other leagues of this kind are at London and Logan. These should be in every community, for the good derived from them is great.

Mr. Montgomery spoke at Inland on "Assisting Farmers' Organizations."

STATE NEWS



The official flag of Ohio, adopted May 9th, 1902. The stripes are red and white. Seventeen stars on a blue field, surrounding a white "O" with a red center.

With winter over and spring beginning, intelligent farmers throughout Ohio are considering what are the prospects for the season's crops.

The condition of winter wheat has much to do with determining the present year's profits. It has therefore been watched carefully. Reports are that wheat has stood the winter well. In some localities the prospects are particularly good.

Though corn is not in the ground, and will not be for some time, much of it is already destined to yield only fair or poor returns. One of the fundamental requirements for a good corn crop is stand. A good stand cannot be secured with poor seed. The late cold season of 1910 produced a quality of corn which is decidedly inferior for seed purposes. When asked how corn graded last fall, Mr. Culver, inspector of grains at the Toledo market, said that most of it did not grade at all. The chief difficulty was that the moisture content was too high. Any of this wet corn which was not; either thoroughly dried out before freezing weather, or kept in a temperature above freezing all winter; is sure to contain dead germs. Much that was kept with some care will probably not grow. Now there is, no doubt, plenty of good seed corn in the state. The difficulty will be to tell which is good and which is not. For this purpose the germination box is a simple and reliable guide. Any man who can operate a corn planter can run a germinator if he is willing to do the necessary work. The difference between a good crop and a poor one will pay fabulous wages for a few days spent testing the seed.

The Extension School at Van Wert was held in the City Hall. The ladies' Domestic Science department met in the "Home Guards' Temple." Twenty-five cents a day, or one dollar for the week, was charged; and the attendance was good.

A recent corn show at Venedocia, Van Wert County, brought out seventy entries.

The Van Camp Co. has opened a station for receiving milk at Van Wert. The first day they received 30 pounds of milk. A month later the daily receipts

were 30,000 pounds. Milk can be produced in Northwestern Ohio.

The third annual Extension School was held at Paulding, Feb. 20-24. An attentive and wide-awake lot of men were in attendance. However, for the county which in 1909 had the first extension school ever held in Ohio, and this year won first prize on yellow corn at the state show, the attendance was not nearly large enough. It is planed to make a systematic campaign for a full attendance next year.

Director Thorne visited Paulding a few days ago to assist the county commissioners in selecting the land to be purchased for a county experiment farm. Bonds have already been sold to raise the necessary funds.

Mr. Ruggles, of Huron County, who won first prize on "ten ears of yellow corn" of the northeastern zone at the State Show, has been growing good seed corn for fifteen years. He plants a strain which is locally known variously as "Hawkes corn", Maumee Dent and "Ruggles corn."

There seems to be a general tendency toward the keeping of better stock all over the state. On March 16th, Mr. R. M. Roberts, of South Charleston, Clark Co., will sell all his grade animals at public auction and begin keeping registered animals only.

San Jose scale is very much in evidence in Erie County. As in many other parts of the state, the seed corn there will all require testing before it can safely be used. Farmers of that section have taken advantage of the open winter to haul out a great deal of manure.

An independent institute was held at Rix Mills, Muskingum Sounty, February 10 and 11. J. L. Buchanan and Wm. G. Culberson were speakers. Frank White, a former O. S. U. student, gave a talk on Farm Manure. All sessions crowded the auditorium and a great deal of interest was shown.

In Lawrence County the prospect of spring has started up activity in the orchards. Trimming is going on, and spraying machinery is repaired or purchased new. The correspondent reports 15 power machines in his own neighborhood, which is five more than last year. He concludes that the power sprayer is a decided success. One of the leading fruit growers of that section recently purchased an additional 200 acre farm. Several others have made similar purchases. An oil boom started a short time ago, but even this excitement fails to draw the enthusiasts away from the production of Rome Beauty apples.

In Ottawa County orchards which have been neglected for ten and fifteen years are being trimmed and otherwise put in shape to return a profit. Preparations are being made to push a spraying campaign.

Holmes County is noted for its horses. Good animals are kept all the time, but the particular feature for which this locality is widely noted is the feeding of drafters for the eastern markets. Weekly sales are conducted at Wooster, which attract a great many buyers.

The Farmers' Institute of Ashtabula County was held in Pierpont, Feb. 14-15. The speakers were Scott and Brigham. Their lectures were full of interest and information to every one present.

The second Williams County Agricultural Extension School, held at Bryan, last month, was a decided success. The farmers were very enthusiastic over it. Although the week was very stormy, the attendance was good. About 100 men were enrolled, while some days the class was over 150. The ladies' course at the end of the wek reached about 75. If the school is held next year a large attendance is assured. All the work was well

received, but the dairy talks by Mr. Rheinhart were especially interesting on account of the amount of milk produced in the county. The Van Camp Co. issued over $37,000 to the farmers last month for milk. During January they paid $2 per hundred; February was $1.90. One man received over $800 for one month's milk. The Institutes in the county this winter were well attended, but all seemed to be during bad weather. A Corn Improvement Association was organized and officers elected on Feb. 25. About 20 farmers are in the association. They expect to work with oats, also. An agricultural course was added to the Bryan High School this year.

Lime is very rapidly coming into use in Cuyahoga County. The farmers are convinced that the sail is in need of this material to correct an acid condition. The presence of sorrel and failure of clover in certain sections leads them to think the soil is acid. Most of the purchases of lime are in small amounts and are made with the intention of using it as an experiment only.

The Celina Extension School was almost a failure on account of the inclement weather. The attendance was only about forty. An agricultural exhibit car came to Celina March 13th.

Recently three Farmers' Institutes were held in Fairfield County and all report a good attendance.

In Fairfield County a greater amount of ditching and tile draining is being done this spring than ever before, for the farmers realize that it pays big profits. On most farms, spring work has commenced and the next two months will be busy ones for farmers in Fairfield.

The Hamilton Farmers' Institute was held in conjunction with the Annual Corn Show, given by the Daily Republican-News, Feb. 15 and 16, 1911. The program in part was as follows: "The Needs of the Miami Valley," Prof. Bruce Fink, of Miami University; "The Rurals Schools of Tomorrow," Dean H. C. Minnich, of the Ohio State Normal College, Oxford, O.; "Methods of Producing More Corn Per Acre," Mr. C. P. Hartley, from Bureau of Plant Industry, U. S. Dept. of Agriculture, Washington, D. C.; "The Management of Clever in Corn Belt Rotations," J. A. Drake, from Bureau of Plant Industry, U. S. Dept. of Agriculture, Washington, D. C. The program was well receiced in every detail. Lengthy and interesting discussions followed each talk. One really could see the benefit of extension work when one local speaker made this statement, "They did not put the cookies on the upper shelf, but placed them down on the lower shelf, where even a child, too, could grasp and learn." This one great thought of the Institute was the realization of the inestimable value of Institutes, Corn Shows and of the Extension Work throughout the state for the betterment of the Farmer.

A decade or more ago Lake County used to have a county fair. But it went to the wall. Since that time there has been no county fair nor a county agricultural society. Recently a meeting was called to organize a new agricultural society and to start a new county fair jroject. A large representation was present from all parts of the county. All seemed unanimously in favor of the undertaking. The society was formed with the name, "Lake County Agricultural and Industrial Society," thus giving the new fair a wider scope than Agriculture alone, but embracing all other industries as well. The opportunities for the success of a county fair in Lake County are very bright, because of the wealth of material she has from which to draw her exhibits. She is well

equipped with registered herds of all the leading breeds of dairy cattle. Some of these herds are famous throughout the country. Besides this she has a number of fine nurseries, one of which is among the largest in the United States. These, together with other industries, give Lake Co. the opportunity of having one of the finest county fairs in the state.

The Agricultural Extension School was held at Hillsboro, Highland County, during the week of January 16th, with an average attendance of one hundred and twenty-five. The speakers were good, each endeavoring to do his work to the best of his ability. The farmers took great interest in the work and at the close of the course a motion was made and voted on by all present, to have the school here next year.

From East Akron comes this paragraph: The Farmers' Institutes of this year are past, but unlike former years, the good that those Institute speakers have brought to us has lasted longer than the melting snow. In a number of places old orchards are being pruned and sprayed for the first time in years. Many farmers are testing their seed corn, and sending to Wooster for bulletins to learn methods for making Summit a banner county.

The twelfth annual session of the Eastern Wood County Farmers' Institute was held at Prairie Depot, Friday and Saturday, Feb. 24-25. The state speakers were J. F. Jordan, of Jamestown, and Frank Blackford, of Eldorado.

An independent Institute was held at Bloomdale, Wood County. The speakers were M. L. Tressler, of Williams Co., and W. Montgomery, of Wapakoneta. Wednesday and Thursday, February 15 and 16, were the dates.

On the 13th and 14th of February there was held in New Berlin, Stark County, the fourteenth annual Farmers' Institute, under the auspices of the Ohio State Board of Agriculture. The two state speakers were Mr. J. L. Buchanan, of Sherodsville, Ohio, and Mr. J. P. Davis, of Sheridan, Ind. Five meetings were held and embraced the following subjects: Selection and care of seed corn, planting, cultivation, etc., the breeding of horses and cattle together with their care and feding. In this the value of the sire was emphatically impressed on the farmer. A new feature of this meeting was Domestic Science, which up to this time had not had a place in the Farmers' Institute. All the ladies enjoyed these meetings much more than was the case formerly. The old and all importan subjects of soil fertility was dwelt upon at length and it is hoped htat it will never be neglected in the future as it has been in the past. The meetings were all well attended and a general interest was shown which bids fair to increase the general interest of the farmer in his farm, and to bring those from the cities who like the independent outdoor life of the American Farmer.

An interesting Farmers' Institute was held at Lucas, Richland Co., on the 17th and 18th of February. The state speakers were Ravis and Buchanan. Many good subjects were discussed.

A great deal more is being done in the dairy line in Brown County than was a few years ago. Several milk and cream routes have been started. Before there was no way of marketing dairy products other than in the form of butter. More cows are being kept, and a great many farmers are using the centrifugal separators. This has never been much of a dairy section, but, if the price of butter remains good, dairying in a few years will receive at least its share of attention.

The following county correspondents sent news for this issue:

A. E. Shanklin—Mercer. ,
D. S. Caldwell—Williams.
C. W. Hengst—Fairfield.
L. M. Oyler—Butler.
C. M. Richardson—Lake.
D. H. Clippinger—Van Wert.
E. L. Surber—Highland.
E. Ewart—Summit.
A. W. Mayferth, Holmes.
Norton Fries—Ottawa.
C. J. Bair—Wood.
Ray V. Cox—Lawrence.
F. L. White—Muskingum.
B. F. Salisbury—Cuyahoga.
T. F. McBride—Richland.
H. J. Brown—Erie.
H. B. Bates—Stark.
E. S. Gilliland—Brown.
C. J. Blue—Madison.
Gilbert Gusler—Paulding.
Walter Holson—Ashtabula.
E. A. Risser—Putnam.

THE OHIO FORESTRY SOCIETY.

The seventh annual meeting of the Ohio Forestry Society was held in connection with the National Corn Exposition, Feb. 3. The attendance was not large, but the well arranged program was carried out from start to finish. In the opening address President Lazenby stated that forestry was one of the fundamental divisions of the broader subjects of conservation, and that speaking for Ohio, conservation means, or should mean, an honest effort to make the state a good one to live in for all of us now here, and equally good, if not better, for all who may come after us.

The present forestry condition in Ohio was summarized as follows: (1) We are compelling those who come after us to pay an almost prohibitive price for wood, a common necessity, and will soon see an end of some of the most important wood consuming industries of the state. (2) Our streams are becoming more and more capricious in their flow, our winds are more destructive, and we are rapidly decreasing the birds that charm us with their songs and aid in our inglorious warfare against our insect enemies. (3) In many places the erosion, or wash, caused by the rapid run-off of our dashing rains and quickly-melting snows, is reducing the deforested hills to barren wastes, clogging our streams, and burying much of the fertile soil of our valleys under sterile sand and gravel.

By proper legislation we can encourage the reforestation of our denuded hillsides and stimulate the planting and care of timber trees. One step would be to relieve woodland from undue taxation. Timber, like other property, may be taxed when cut, but to tax land and the wood crop growing thereon every year is manifestly unjust.

The forestry society is growing in strength and influence. Its primary object is to promote the forestry interests of Ohio. It is an organization that stands for good scholarship, good citizenship and good fellowship.

Prof. Bruce Fink, of Miami University, gave an interesting account of "Forestry at the great conservation congress" at St. Paul, last September. He gave some statistics showing what was being accomplished by the United States Forest Service, and the urgent necessity of better protection of our forests.

Mr. C. H. Goetz, instructor in forestry, in the Ohio State University, discussed the subject of "Timber Waste in the Northwest." The sharp competition between lumbermen and the excessive freight charges by railroads were among the main causes of this waste.

Mrs. Clara Murdoch, of Akron, rep-

resenting the Federated Women's Clubs of the state, gave an excellent address showing what woman was doing in the way of developing "unused forces," and advancing the great cause of spiritual as well as material conservation.

"County Forestry Societies" was the subject of an equally interesting and instructive paper by Mr. George W. Miller, of Bucyrus, the President of the Crawford Co. Forestry Society. He pointed out what this organization had accomplished in its short history and urged the formation of similar societies in other counties.

Following the reading of the papers the Society was privileged to hear a short but inspiring address from Mr. Edwin A. Start, the accomplished Secretary of the American Forestry Association. After an interesting discussion, in which a part was taken by such well-known authorities as W. J. Green, H. C. Rogers, Edmund Secrest, J. J. Crumley and others, the Society held its regular business meeting.

The election of officers resulted as follows: President, William R. Lazenby; vice president, W. J. Green; secretary, J. J. Crumley; treasurer, H. C. Rogers; member of executive committee, Geo. W. Miller.

The Extension Department is doing work, that is being highly commended, in the publication of the "Farmers' Reading Course." Two very instructive and practical publications have been published. The first one treated of "Soil Formation" and was written expressly for this occasion by Prof. Alfred Vivian. The second issue discussed "Drainage of Farm Land." Professor A. G. McCall surely put the fundamentals of drainage before the readers in a creditable manner.

At the recent dispersal sale of the famous Whitehall Duroc-Jersey herd of Mr. E. S. Kelley at Yellow Springs, O., Ohio State secured a valued acquisition in the way of a beautiful gilt. She was considered one of the bargains of the sale, at $175. Bred in the purple, she is in pig to the great Instructor, the boar for which Mr. Johnson paid $1550. The average price of ten sows bred to this great boar was $183.62.

There have been four schools per week on the average ever since the middle of November. These have been well attended in most every case, making an average of over fifteen hundred people, both men and women. This represents in a large way the people who are help-

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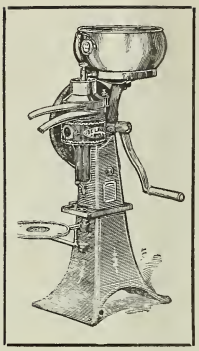

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